# CURRENT LITERATURE

## NOTES FOR STUDENTS

**Permeability.**—Further evidence against CZAPEK's theory of protoplasmic permeability is offered by Miss WILLIAMS,[1] who finds that immersion of tissues of *Saxifraga umbrosa* in certain electrolytic solutions, aluminum, potassium, and barium chlorides, potassium and barium nitrates, produces abnormal permeability to 0.2 per cent ferric chloride. Penetration was evidenced by reaction with tannin. The time of immersion required to bring about the change varied somewhat with the electrolyte, and greatly with the concentration employed. In all the electrolytes used, except barium chloride, plotting logs of time against logs of concentration in gram-mols per liter gave approximately straight lines. The abnormal permeability to iron chloride was induced without rendering the protoplasm permeable to colored cell sap in certain cells, and at surface tensions far from that considered critical by CZAPEK.—C. A. SHULL.

**Colorimeter and indicator method.**—DUGGAR[2] and DODGE have devised a method of obviating the interference of colored biological fluids with the indicator method of $P_H$ determination. This is accomplished by placing equal layers of the colored test fluid on each side of a colorimeter; that on the left side receives the indicator, that on the right serves simply as a color blank. Equal layers of standard solution are also placed on each side; that on the right receives the indicator, that on the left serves as a blank.—J. J. WILLAMAN.

**Flora of the Congo.**—WILDEMAN[3] has resumed the publication of his studies of the Congo flora, which is prolific in new species. In the 5 fascicles just distributed, 334 new species are described, representing 39 families. The most largely represented families are Orchidaceae with 58 new species (27 of which belong to *Angraecum*) and Gramineae with 33 new species. Only 2 new genera are described, one in Leguminosae (*Pynaertiodendron*), and the other in Cucurbitaceae (*Bambekea*).—J. M. C.

[1] WILLIAMS, MAUD, The influence of immersion in certain electrolytic solutions upon permeability of plant cells. Ann. Botany **32**:591–599. 1918.

[2] DUGGAR, B. M., and DODGE, C. W., The use of the colorimeter in the indicator method of H ion determination with biological fluids. Ann. Mo. Bot. Gard. **6**:61–70. 1919.

[3] WILDEMAN, E. DE, Florae Congolensis. Bull. Jard. Botanique Bruxelles **4**:361–429. 1914; **5**:1–108. 1915; **5**:109–268. 1916; **6**:1–129. *pls. 35.* 1919.